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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,140	04/12/2005	Alexis Boletis	2590-111	6284

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EXAMINER
KWOK, HELEN C

ART UNIT	PAPER NUMBER
2856	

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/526,140	BOLETIS ET AL.	
	Examiner	Art Unit	
	Helen C. Kwok	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *March 2, 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *Mrach 2, 2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The abstract of the disclosure is objected to because it contains legal phraseology (i.e. said). Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities. Appropriate correction is required.

The specification should be self-contained without referring to the claims. For example, on page 5, line 4, it refers to claim 1.

Claim Objections

4. Claims 1-11 are objected to because of the following informalities. Appropriate correction is required.

In claim 1, line 3, what is the word "it" referring to?

In claim 4, line 9, the phrase "said six vertically" should be changed to – said 6 vertically – to provide proper antecedent basis.

In claim 8, line 2, it appears that the word "or" should be deleted.

In claim 9, line 4, what is the word "its" referring to?

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, lines 7-8, the phrase "the upper said electromagnets" and "the lower said electromagnets" lacks antecedent basis. There is no mentioning of "an upper" and "a lower" electromagnets. In lines 16-17, the phrase "said position sensors" lacks antecedent basis.

In claim 5, line 9, the phrase "the upper electromagnet" lacks antecedent basis. In line 10, the phrase "the lower electromagnet" lacks antecedent basis. In lines 18-19, the phrase "said position sensors" lacks antecedent basis.

In claim 6, line 3, the phrase "said inertial ferromagnetic mass" lacks antecedent basis.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 2,919,583 (Parker).

Parker discloses a magnetically supported gyroscope comprising, as illustrated in Figures 1-2, an inertial sensor (i.e. non-contact gyroscope or non-contact accelerometer); an inertial mass 10 (i.e. spherical or cylindrical ferromagnetic body) includes active magnetic bearing units to levitate the inertial mass in such a way to control the position of the inertial mass along three independent axis; to create restoring forces that can be oriented in any of the two directions of the independent axis; 6 electromagnets 11,12,13,14,32,33,42,43 disposed along three orthogonal axis; 6 position sensors 71 disposed along three orthogonal axis; an outside frame 25 hermetically sealing the inertial sensor; an amplifier 15 for signal conditioning the position sensors; a compensating magnet placed above the inertial mass; a motor function implemented by applying a rotating magnetic field. (See, column 3, line 37 to column 6, line 25).

9. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 3,491,600 (Kasparian, Jr.).

Kasparian, Jr. discloses a three-axis acceleration device comprising, as illustrated in Figures 1-3, an inertial sensor (i.e. non-contact accelerometer); an inertial mass 10 (i.e. spherical or cylindrical ferromagnetic body) includes active magnetic bearing units to levitate the inertial mass in such a way to control the position of the inertial mass along three independent axis; to create restoring forces that can be

oriented in any of the two directions of the independent axis; 6 electromagnets 12 disposed along three orthogonal axis; 6 position sensors 14 disposed along three orthogonal axis; an outside frame hermetically sealing the inertial sensor; an amplifier 17 for signal conditioning the position sensors; a compensating magnet placed above the inertial mass. (See, column 3, line 31 to column 6, line 40).

10. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 1,077,379 (Yamamoto).

Yamamoto discloses a displacement sensor comprising, as illustrated in Figures 1-20, an inertial sensor (i.e. non-contact gyroscope, non-contact accelerometer, inclinometer, gravimeter); an inertial mass (i.e. spherical or cylindrical ferromagnetic body) includes active magnetic bearing units to levitate the inertial mass in such a way to control the position of the inertial mass along three independent axis; to create restoring forces that can be oriented in any of the two directions of the independent axis; 6 electromagnets disposed along three orthogonal axis; 6 position sensors disposed along three orthogonal axis; an outside frame hermetically sealing the inertial sensor; an amplifier for signal conditioning the position sensors; a compensating magnet placed above the inertial mass; a motor function implemented by applying a rotating magnetic field. (See, section [0030] to [0099]).

11. Claims 1-5 and 8 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,344,235 (Flanders).

Flanders discloses a levitated ball inclinometer comprising, as illustrated in Figures 1-8, an inertial sensor (i.e. inclinometer); an inertial mass 10 (i.e. spherical or cylindrical ferromagnetic body) includes active magnetic bearing units to levitate the inertial mass in such a way to control the position of the inertial mass along three independent axis; to create restoring forces that can be oriented in any of the two directions of the independent axis; 6 electromagnets 12,14 disposed along three orthogonal axis; 6 position sensors 28,30 disposed along three orthogonal axis; an outside frame 68 hermetically sealing the inertial sensor; an amplifier 50 for signal conditioning the position sensors. (See, column 1, line 51 to column 3, line 48).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references cited are related to sensors having electromagnets to create a magnetic field.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Helen C. Kwok
Art Unit 2856

hck
November 15, 2006